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ORIGINAL LECTURES.

CLINICAL LECTURE

ON SOME PRACTICAL POINTS IN THE STUDY OF BRONCHITIS, AND PARTICULARLY OF THE ACUTE CATARRHAL VARIETY.

(Delivered at the Bellevue Hospital Medical College.)

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BRONCHITIS, as its name implies, is an inflammatory disease of the bronchial tubes. Its seat is the mucous membrane covering these structures. It may at times extend beyond them, and affect the trachea, larynx, and pharynx. Sometimes it attacks more particularly the large- or medium-sized bronchi; again it becomes fixed, as it were, from its initial stage in the capillary air-passages. Rarely the whole respiratory tract is implicated at the same time, although there are many regions where its intensity is specially manifested. Usually this intensity will in a measure depend upon the extent or area which marks the morbid processes. The time and stages through which it lasts are variable, and nothing can be absolutely predicated in advance of the turn it may take. Just as the terminations of the disease are numerous, so are the influences which give rise to it. Each case of bronchitis is not, surely, similar to another; it may differ essentially; and we have distinguishing features to which we attach different names, in order to separate distinct forms. An attack of bronchitis may be very rapid in its onset, with irritating cough and high fever. Thus, we have acute bronchitis. This latter may be established in the first divisions of the bronchi, or else it may be speedily propagated to the capillary air-passages. It is catarrhal in nature, and primary,—viz., follows no other disease,—and is determined by the usual causes which produce cold. But under certain circumstances it may tend to become lasting, and degenerate into the chronic variety of this disease. Those instances of bronchitis following in the wake of the exanthemata and other febrile diseases are apt to be of this type.

There is also a rare form of bronchitis,

in which the exudation is fibrinous in character. On account of its great relative infrequency, it has been less exhaustively studied than the other forms. Its history and march are usually somewhat obscure, whilst its duration is considerable. I have brought a specimen to show you, which was sent me by a medical friend, some time since, as a great curiosity. You will remark that, except for its white color, you might suppose you saw before your eyes a bronchus with all its minute subdivisions, so perfectly is it preserved. This specimen was expectorated by a small child, and such masses are said to have been thrown off every third or fourth day, for more than a year, without notable interference with the general health. All ordinary remedies were tried, and proved wholly unsuccessful in ameliorating the symptoms.

Bronchitis of the acute catarrhal type is encountered at every age of life. Owing, doubtless, to a less degree of resistance to external impressions caused by sudden atmospheric changes, the very young and the aged are specially predisposed to contract it. When this is the case, it is apt to extend itself in the direction of the smaller tubes, and thus becomes a most menacing affection, even to life itself. The vigorous constitution is not so often attacked as the one which is undermined by ill health or a dissipated life. In like manner, breathing a pure, elastic atmosphere wards off the disease, when close, confined chambers, or the air of factories and workshops, bring it on or root it firmly when once the organism has been subjected to the bad influences of excessive fatigue and exposure to draughts of air. How much sudden changes from cold to warmth, or from a heated atmosphere to one that is chilly, are to be dreaded, each one among you knows as you know any axiom of life. But you have not, perhaps, thought how immediately chilling of the surface drives all the blood which courses through our integument down deep in the visceral structures, which soon are clogged in their circulation and become congested to a greatly increased degree. At one time a patient is attacked after this manner with bronchitis; at another he may have equally well an inflammation of the parenchyma of the lung itself (pneumonia). To many authors the causes named are not always

sufficient to occasion an attack of acute bronchitis. They still hold fast to the ancient doctrine of special morbid agents contained in the ambient atmospheric medium. And certainly at times when bronchitis is epidemic, when people are attacked by it on all sides, there can scarcely be a doubt that there is "a contagium" in the air we breathe. But I am loath to believe this is true of sporadic cases, which I consider sufficiently explained by a sudden stoppage of physiological function in an important organ like the skin. Acute bronchitis may, and often does, follow those diseases in which blood-poisoning is so manifest. Here we can but suppose that the loss of vitality, or adynamia, of the patient, is for much in its development.

As I have shown already, in a paper read before the Academy of Medicine,* nothing is more frequent than congestion and inflammation of the respiratory mucous membrane following acute cardiac disease. Authors do not, it seems to me, pay sufficient attention to these facts, or, if some of them have signalled the bare facts in a few arid remarks, they have not recognized the importance of a special drug (*digitalis*) in keeping up heart-action and thus preventing the stagnation of blood in the lung-tissue. Of course I am not ignorant of the well-known descriptions of lung-complications (bronchitis, oedema, pneumonia, etc.) following old cardiac troubles, but it is to their *acute forms* that I would point with warning, as leading to serious consequences in the lungs, unless they are avoided by timely and proper therapeutical interference. Lastly, in speaking of the causes of acute bronchitis, I would not have you ignore what an essential factor in causing it chronic lung-affectations are; notably, emphysema stands forth. In our hospitals and dispensaries, how numerous are the patients who come to us with acute congestion of bronchial mucous membrane grafted upon a lung whose air-sacs and alveoli are very generally expanded and have lost nearly all their original elasticity! Such cases are difficult to treat successfully, and will make demands on all the resources of your curative armamentarium. The generally-received idea among beginners in medicine is that bronchitis attacks the bron-

chial tubes immediately when cold is taken. This is not a correct view, since it is much more frequent to find the nasal passages, pharynx, and larynx sore and inflamed several hours before the bronchial tubes are touched at all. When they are affected, the mucous membrane soon becomes red and swollen; it loses in part its consistence, and seems softer than normal. The bronchial tubes, at first, contain a moderate quantity of clear mucus, mixed with foam, if the cough is severe; later on the discharge becomes yellowish or green, and contains a greater or less quantity of pus-cells. It is rare to find the tubes on one side of the chest intact and the other side of the chest in healthy condition. In general, the inflammation is nearly symmetric, and marches equally on both sides. Hence it is *always* a suspicious circumstance, in auscultation of the apices of lungs, to find moist râles on one side and not on the other (phthisis?). Habitually, as I have stated, the bronchial tubes are inflamed in acute bronchitis, but instances have been observed in which there was abundant secretion and yet no visible signs of inflammation. In these examples the sole evidence of a morbid condition consists in the hyper-secretion of mucus.

Emphysema is, as I have said, a frequent accompaniment of acute bronchitis, and would appear as if it existed prior to the attack, and was in some degree responsible for its appearance. But this is not by any means the whole relation of these diseases to each other; for, just imagine, gentlemen, that the bronchitis has taken hold of previously healthy lungs, and that the secretion has become not only abundant, but also viscous. One or more pellets of this thick, sticky secretion block up partially a small bronchial division here and there, and, whilst the inspired current has sufficient force to pass beyond it into the air-sacs, these air-sacs cannot in their turn expel entirely their contained volume of air during expiration and before a fresh column of air is again drawn into the lungs. This being the case, the sac and alveolar walls lose a portion of their elastic power at first, and finally give way or expand notably. The result is a manifest formation of more or less vesicular emphysema. If atelectasis be produced, it is effected in rather a different manner: a plug of inspissated mucus becomes tolerably well

* September 20, 1877.

fixed in a bronchus of small calibre; in a brief period the expiratory movement pushes the pellet of mucus onward towards a somewhat larger bronchus,—but this progress is only a very slight one, by reason of the size of the bronchus and the facility with which the air passes by the side of it. The reverse or inspiratory current acts differently and more effectively, for it pushes the pellet of mucus farther and farther into a small subdivision of the bronchus at each successive movement, until finally it is lodged firmly or immovably in the tube and the indrawn air is arrested and cannot pass beyond it. An evident and necessary consequence is the production of atelectasis, or falling-in of lung-cells of the region in question. In adults the extension of acute bronchial inflammation usually stops with the minute bronchial tubes and does not go beyond. Then we may have localized or generalized pulmonary congestion or œdema, but not lobular pneumonia. In the case of children the inflammation may extend itself even to the alveoli, and nodules of catarrhal pneumonia distributed throughout the lungs are only too frequent at these autopsies.

Let us now turn to the initial stage of an attack of bronchitis of acute type,—i.e., ordinary cold,—and see how it progresses and how it may be differentiated with other conditions resembling it. The first symptoms are usually those of an inflammatory affection of the nasal passages, throat, and larynx, rather than what relates directly to the subsequent chest-trouble. The pituitary membrane is red and swollen; there is congestion of the pharynx, and soreness upon swallowing; and there is also a moderate degree of hoarseness. With these local symptoms, the patient complains of chilly sensations; of dull aches and pains in the back and limbs; of constriction over the anterior chest-walls; and of a feeling of increased warmth. The pulse is accelerated, and, by the use of the thermometer, a moderate elevation of temperature is shown. So soon as the larynx becomes involved, cough declares itself. As the trachea and large bronchial tubes are attacked, the cough is still more frequent and harassing, with difficult or absent expectoration. The cough is often paroxysmal in character, and after each attack of it the patient has great soreness under the sternum,

and not infrequently over the epigastric region, and even lower down in the abdomen. The respirations are frequent and labored, and there is more or less dyspnoea, owing, no doubt, to the dry and swollen condition of the entire upper portion of the respiratory mucous surfaces. At first, when a physical examination of the chest is made, the respiratory murmur is simply found more feeble than normal, and there may be a few scattered, dry rhonchus. The chest-movements are restricted, and there is increased abdominal elevations whenever air is inspired. Palpation and percussion are incapable of revealing any satisfactory signs. It has been said the interscapular region is duller than usual at this stage; but this is not a sign which is to be relied upon, as it requires much faith to be satisfied of its presence. The same may be affirmed of vocal resonance, which only presents very delicate shades of difference with that degree which normally exists. At a more advanced stage (or the period of *coction*, as it was called by the humorist pathologists of a by-gone era) the sputa become more abundant, and change their physical characters. They first assume a yellowish coloration, and are of thicker consistence; finally they are green, which indicates a greater number of pus-corpuscles contained in their substance. These are readily revealed by the microscope, which also shows effete epithelial cells and mucous corpuscles in large number, together with some stray red globules. At this stage, if the ear is applied to the chest, either in front, under the clavicles, or posteriorly, over the regions covered by the scapulæ, a large, though variable, number of moist râles, of all sizes, are easily heard. The noise arising from the continual passage to and fro of the air over this secretion is such as at times to be heard at several feet distance from the patient's body, and the breathing during sleep may then become what is termed *stertorous*, such as is present after an apoplectic attack.

The only two affections with which an acute attack of catarrhal bronchitis of the large tubes might possibly be confounded are pleurisy and pneumonia. In neither of these diseases, however, do we have the prodromic symptoms upon which I have insisted; and when the disease becomes established, the absence of dulness on percussion, loss of thoracic vibrations,

œgophony, and increased dimensions of one side of the chest, are sufficient signs to distinguish an ordinary cold from the former; whilst from pneumonia, the characters of the sputa, the absence of increased thoracic vibrations, of tubular breathing, and bronchophony, etc., should be all that is required to separate it from pneumonia of croupous or even catarrhal character. An attack of ordinary cold lasts from a few days to several weeks, depending upon the care given to its hygienic and remedial treatment, and likewise to the constitutional peculiarities of the individual attacked. Frequently repeated, such attacks will finally lead to some permanent thickening of the mucous membrane, and to more or less constant secretion from this surface. Furthermore, we may have, as an ultimate sequela of prolonged and successive inflammations, on the one hand some dilatation of the extremities of the terminal bronchi, or, on the other, infiltrated spaces, through which there is decided stenosis of the tubes, from outward pressure and internal thickening. Never, except in very young people or those advanced in life, ought an attack of acute catarrhal bronchitis to be a direct efficient cause of death. If it were so, it would indicate, as a rule, either great ignorance on the part of the physician or woful imprudence in the patient; and yet I regret to state that from neglected and badly-treated colds spring the greater number of those instances of catarrhal phthisis, followed by secondary tuberculous formations, which constantly augment the mortality of our large cities and towns. In the country the recuperative energies are so great, in the midst of purer atmosphere and a more natural existence, that the organism resists those influences which, with different surroundings and different habits, frequently prove fatal.

The old form of treatment of a cold was a Dover's powder at bedtime and a saline purge in the morning, and, if this treatment did not cut short an attack, it was followed by abundant doses of diuretic and diaphoretic mixtures, to make the kidneys and skin do their full share of elimination and at the same time withdraw an overcharge of blood from the bronchial mucous membrane. Occasionally inhalations were added, and the head of a too confiding adult was entirely covered under a hood or light woollen blanket,

and then steam from a jug filled with boiling water was slowly inspired so long as it could be endured.

Now, it appears to me that within a few years such treatment has been notably improved, both in regard to efficiency and in regard to comfort. I therefore desire to inform you of what the improvement consists.

The drug above all others which is most useful in an attack of acute bronchitis is carbonate of ammonia,—an alkali, gentlemen,—and yet not at all given because there is suspicion of latent gout, upon which the attack is dependent. No, it is given simply because it acts efficiently, without causing headache, anorexia, or constipation to the patient,—as a large dose of opium does; and, if taken regularly from the beginning of the attack, will, in my opinion, do better service than almost any other remedy. The ammonia must be given frequently, and in tolerably large doses, in some bland fluid, as mist. acaciæ or orgeat syrup. From three to five grains every two hours is an adult dose of sufficient amount to abort many attacks of cold, if taken when the patient first begins to have tickling in the nose and frequent sneezing. If the attack is allowed to continue its march without being altered by remedial treatment, the carbonate of ammonia will help it wonderfully during twenty-four to thirty-six hours, but will not be likely to check entirely its development and progress. If there is much pain in the pectoral region, very small doses of morphine (of which the bi-meconate salt is the least likely to diminish appetite) should be combined with the ammonia. If this salt is not readily procured, tinctura opii deodorata may be added in one- to three-drop doses. Just enough anodyne is useful to lessen somewhat local irritation of the inflamed mucous membrane, without at all diminishing the facility with which secretions may be expelled from the chest and throat. After thirty-six hours the ammonia must be temporarily stopped, on account of its secondary effects, which are depressing; and if its employment appears desirable, after a lapse of a few days' interval, it may be given in the same doses, and for the same length of time, as at first. Aconite is a noble remedy, if properly used, in all forms of acute cold, and particularly in the treatment of acute catarrhal bronchitis. It should be

given frequently, but in small doses; one-fourth of a drop of the tincture every hour is quite enough, and after six or eight doses are taken the intervals may be lengthened. In giving aconite, especially after the indications contained in Ringer's Therapeutics, you must always remember that our tincture of the root is three times the strength of that contained in the British Pharmacopœia, and should not, therefore, be given in as large doses. Moreover, whilst I fully recognize the important action of aconite in lessening the extent and intensity of inflammatory changes, I believe it always well to have in view its effects upon heart-action, which vary so much in different individuals. That it does depress the movements of the heart and lessen the vigor of its contractions, no one, I venture to say, doubts; and this effect, in so far as the heart is concerned, is not what we have need of to get rid of an inflammatory condition where stagnation in capillary blood-vessels plays an important rôle. Nevertheless, when combined with carbonate of ammonia its injurious action is felt less, or not at all, and thus adjoined it should be given.

According to Dobell, of London (from whose writings I first borrowed many of my ideas of the employment of aconite and ammonia in the internal treatment of colds), aconite is particularly useful in instances in which the attack of bronchitis is accompanied by asthmatic attacks. This I believe to be true, although in my own experience Hoffman's anodyne is then more recommendable, as it seems to lessen the spasm of the bronchi without exercising any deleterious effect whatsoever. I have rarely, if ever, procured any very lasting good effects from the use of iodide of potash in the treatment of acute catarrhal bronchitis, and I am entirely satisfied, unless the iodide be given in very small doses (two to five grains every six hours), it will, in almost all but specific cases, do positive injury. Not long ago I was called, in an urgent manner, to see a patient with an acute attack of bronchitis and an accentuated asthmatic tendency, to whom I had prescribed five grains of iodide of potash, combined with $\frac{3}{4}$ ss doses of sp. æth. comp. three times in twenty-four hours. On my arrival, and though my patient had taken but three or four doses of medicine, I found her eyes and nose much inflamed and painful, and her

breathing, instead of being improved, was decidedly worse. The only real way in which the iodide may be useful is by producing a moderate artificial inflammation first of all in the nasal passages, and thus relieving the congested bronchial membrane. But if, unfortunately, its action goes beyond a certain degree, then we see artificial inflammation of this membrane take place, and there is no longer a useful derivative influence exercised, but merely an increase of the distressing symptoms we desire to ameliorate.

There is one other internal remedy, to be given by the stomach, which will do you good service whenever the mucous secretions become too viscous, and are detached with difficulty and after painful and tiresome cough. The drug I desire to mention is chloride of ammonium,—the one rendered so famous by its use in certain forms of neuralgia (Anstie).

Well, gentlemen, it is an excellent remedy, and you may give it in doses of fifteen to thirty grains with decided benefit. It has a saline pungent taste which, to some patients, is objectionable, and, if so, may be disguised successfully by a small amount of fluid extract of liquorice incorporated with each dose.

There is, gentlemen, a proprietary remedy which has been sold widely in this city, and achieved considerable notoriety, and is said to work wonderful cures in all cases of acute cold. The one I allude to is bronchine. Well, now, in order to take away all mystery from this panacea, allow me to inform you that its principal ingredients are Epsom salts, spirit of Mindererus, syrup of lemon, and water, united in such proportions as to make up a tolerably palatable mixture. The following is its exact formula, as given to me by an excellent pharmacist:

R Magnesii sulph., $\frac{3}{4}$ i;
Liq. ammonii acet., $\frac{3}{4}$ i $\frac{3}{4}$ j;
Syrupi limonis,
Aquæ, aa $\frac{3}{4}$ j.—M.

S.—A tablespoonful every three or four hours.

Here we have a saline combined with a diaphoretic, or diuretic (according to circumstances), and which acts well, as I have had many occasions to verify. Still, it is simple,—very simple,—and, shorn of its spurious reputation, would only be in-

cluded among numberless other mixtures neither much better nor much worse.

Rarely, in cases of an attack of acute catarrhal bronchitis, do I make use of a counter-irritant to the chest-walls. It is not essential, and merely causes inconvenience to the patient without any special return in the way of increased rapidity of cure. When the cold in the head, at the beginning of an attack of bronchitis, is excessive and annoying, the snuff-powder of Ferrier, composed of bismuth and gum, with a less quantity of morphine than he recommends, will be found rather useful in lessening mucous congestion. But let me say here that the carbonate of ammonia will do it far better, and by its use alone the patient will find his nasal passages becoming speedily much clearer; and in some instances the effects are really remarkable.

In another lecture I shall have an opportunity of speaking of the march and treatment of chronic bronchitis.

ORIGINAL COMMUNICATIONS.

THEVETIA ICCOTLI AND ITS GLUCOSIDE.

BY DAVID CERNA, M.D.

(Continued from page 397.)

LOCAL Action.—Of the local action of thevetin but little is to be said. It has no apparent effect, as already stated, on either the muscles or nerves, as both structures seemed to respond to galvanic irritation equally as well after as before the local application of the poison. When thevetin is applied directly on the skin, or is placed upon any raw surface, it produces an irritation at first, after a while giving rise to a peculiar burning sensation. Upon the tongue it has similar action, accompanied with a numbness which somewhat disturbs the acute sensibility of that organ.

On the Heart.—I found that when thevetin is applied directly to the exposed heart of the frog, it produces at once irregularity of action, with complete paralysis, in a very few minutes, the heart appearing then bloodless and much contracted.

On the Pulse.—Thevetin produces a diminution in the number of heart-beats. In large doses, its depressing action upon the cardiac rate is very decided. The

slowing of the heart-beats may be due to change of blood-pressure, to the influence which a drug has on the cardio-inhibitory apparatus (by stimulating it), to a depressing action on the cardio-motor ganglia, or by acting on the heart-muscle itself. It is found that thevetin is still able to reduce the pulse-rate after section of the vagi, and even after all nervous connection with the heart is cut off, as the following experiments will show:

No. 49.—Dog.

Time.	Dose.	Pulse.	Remarks.
		75	Cut both pneumogastrics.
11.12	1/4 centig.	...	Injection into femoral vein.
.13		72	
.14		72	
.15.30		68	Muscular tremblings.
.16		69	Convulsions.
.16.15		67	
.18		54	
.18.35		52	
.20		...	Animal dead.

Experiments 50 and 51 were precisely similar in method and result to that just recorded.

No. 52.—Cat.

Time.	Dose.	Pulse.	Remarks.
		73	Cut all nervous connection with the heart; artificial respiration.
12.3	1/4 centig.	...	Into femoral vein.
.5		70	
.5.30		69	
.6		69	
.6.15		68	
.7.15		60	
.8		64	
.9.15		52	
.9.45		0	

Thevetin, therefore, as the above experiments seem to prove, diminishes the number of heart-pulsations by its influence on either the heart itself or upon its contained ganglia; but, as we have seen that the drug acts powerfully on the cardiac muscle when applied locally, we can almost safely put out of the question any effect on the ganglia, and conclude that thevetin reduces the pulse-rate by its action on the heart-muscle.

On Blood-Pressure.—Thevetin causes the column of mercury in the cardiometer to ascend above its normal height. This rise is constant, as will be shown in the experiments that follow. The mercury stays up, but subsequently falls, due, of course, to paralysis of the heart,—that is, when the dose has been large enough to cause death. Twenty experiments were made, although only a few are here separately reported; cats, dogs, and rabbits were employed. The carotid and femoral arteries were used for the manometer; the poison was usually introduced into the ex-

ternal jugular, saphenous, or femoral veins; similar results, however, were obtained when the drug was injected subcutaneously. Small and large doses seem to have the same effect, proportionately, on the arterial pressure.

No. 53.—Rabbit.

Time.	Dose.	Pressure.	Remarks.
		185	
9.18	¼ centig.	...	Injected into jugular.
.19		190	
.19.30		192	
.20.15		194	
.22		195	
.23		196	
.25		200	
.28		200	
.28.30		165	Convulsions.
.29		171	Convulsions continue.
.31		...	Dead.

No. 54.—Rabbit.

Time.	Dose.	Pressure.	Remarks.
		183	
11.14	¼ centig.	...	Into femoral vein.
.16		210	
.16.45		205-210	
.17.15		210-215	
.17.30		215-220	
.17.45		225	
.20		165	Clonic convulsions.
.20.15		160-165	Convulsions continue.
.20.30		...	Animal dead.

The increase of the arterial pressure may be owing to an acceleration of the heart's action, to an action on the heart itself which would cause that organ to propel more blood, or to contraction of the capillaries, due either to stimulation of the vaso-motor centre in the medulla or to a direct action on the vaso-motor nerves themselves. It is found that thevetin is still able to elevate the blood-pressure after section of the pneumogastrics, and even after the cord is cut,—i.e., after vaso-motor paralysis; so that its action must be either upon the heart itself or upon the vaso-motor nerves, irritation of which would produce a diminution in the calibre of the capillary blood-vessels, and thus an increase in the blood-pressure. In all the experiments in which division of the medulla spinalis was made, post-mortem examinations showed complete section of the cord. Of the various experiments, only three are detailed.

No. 60.—Rabbit.

Time.	Dose.	Pressure.	Remarks.
		195-205	
3.47	¼ centig.	...	Cut both vagi.
.48		200-210	Injected into jugular.
.48.30		205-210	
.49		210-215	
.50		210-220	
.53	¼ centig.	...	Into saphenous vein.
.54		220-225	
.54.45		225-230	
.55		175	Convulsions.
.56		160	Opiathotonos.
.57		...	Heart ceases to act.
.59		...	Animal dead.

No. 61.—Dog.

Time.	Dose.	Pressure.	Remarks.
		200-212	Vagi divided.
12.53	1 centig.	...	Into femoral vein.
.54		225	
.55		260-270	Struggles.
.56		260	
.56.15		280	Quiet again.
.56.30		290	
.57.30		160	
.57.45		170	
.58		...	Pulse stopped.
.58.15		...	Death.
1.4		...	

No. 62.—Dog.

Time.	Dose.	Pressure.	Remarks.
		210-212	Vagi cut; cord divided between atlas and occiput; artificial respiration.
11.48	¼ centig.	...	Into jugular vein.
.48.30		250	
.50.30		250-260	
.50.45		260-270	
.51		260-270	
.53		270	
.53.30		273	
.54		...	Dog is dead.
.56		...	

Many experiments were performed by applying the drug locally or by giving it subcutaneously to the frog, and then watching patiently the web of the batrachian's foot under the microscope, to see if there would be produced any change in the size of the capillary blood-vessels (a micrometer being used); but in no case did the capillaries undergo any change whatsoever, showing, therefore, that neither the muscles of the walls of the vessels nor the vaso-motor nerves are influenced by the poison. That being the case, we must, at present, arrive at the conclusion that thevetin increases the arterial pressure by an action on the heart itself, probably by stimulating its intra-cardiac ganglia.

On the Respiratory System.—The respiratory function in thevetin-poisoning is somewhat irregular. The drug causes sometimes an increase in the respiratory movements at first; at other times we have a primary decrease, followed by an increase in the number of those movements; most frequently, however, we have a primary increase, this being followed by a diminution, and finally by their complete cessation. The following experiments will serve as examples of a large number made:

No. 65.—Dog.

Time.	Dose.	Respirations per minute.	Remarks.
		28	
10.58	5 centig.	...	Subcutaneous.
11.		32	
.1		32	
.3		29	
.7		27	
.10		26	
.23		23	
.25		20	

No. 66.—Mouse.

Time.	Dose.	Respirations per minute.	Remarks.
		140	
11.44	½ centig.	...	Subcutaneously.
.49		160	
.50		160	Clonic convulsions.
.51		151	
.54		108	Convulsions.
.57		40	Paralysis.
.59		0	

No. 68.—Guinea-Pig.

Time.	Dose.	Respirations per minute.	Remarks.
		76	
4.19	½ centig.	...	Subcutaneously.
.22		114	Convulsions.
.24		90	
.26		90	
.30		76	
.33		21	
.34		15	
.35		0	

The same results are obtained after section of the pneumogastrics.

No. 72.—Rabbit.

Time.	Dose.	Respirations per minute.	Remarks.
			Vagi cut.
10.14		24	
.16	½ centig.	...	Into femoral vein.
.18		64	
.19		72	Paralysis.
.21		4	Convulsions.
.24		0	Animal dead.

But, as will be seen in the following experiment (one out of three performed), the acceleration in the respiratory movements does not occur after section of the cord, which shows that the primary increase in the number of respirations is due evidently to excitation of the respiratory centres in the medulla oblongata. The subsequent decrease and final cessation of the respiratory movements are due, probably, to an action on the functional nerves and muscles of respiration, because it is possible that the drug has this action on these particular structures.

No. 75.—Rabbit.

Time.	Dose.	Respirations per minute.	Remarks.
		128	The cord was cut in the cervical region; injection into external jugular vein.
10.42	½ centig.	...	
.43		84	
.46		82	
.48		64	
.55		50	Paralysis.
.57		48	Convulsions.
.58		36	
11.2		0	

Action on the Nervous System.—From previous experiments, we have seen that thevetin produces convulsions frequently in mammals; less so in birds, with the exception, perhaps, of the pigeon; rarely

in batrachians; the convulsions being clonic or tetanic,—the former being much the more frequent. That the convulsions produced by thevetin are not due to any action of the drug upon the muscles themselves, or upon the peripheral ends of the sensory or motor nerves, was proven by the following and other similar experiments:

Experiment 77.—Cat. The right femoral artery was tied, and half a centigramme was injected into the external jugular at 12.5 P.M. 12.9, violent clonic convulsions all over the body; 12.11, the animal is dead.

Experiment 78.—Dog. Tied the abdominal aorta, and, after being assured that there was no circulation in the lower extremities, one centigramme of thevetin was injected subcutaneously at 9.35 A.M. 10.45, decided clonic convulsions uniformly all over the body, which continued for five minutes, being followed by death.

The convulsions must be due either to the action of thevetin upon the spinal cord or upon the brain. I found in four experiments that the convulsions do not occur after section of the cord below the point of division. The evident conclusion is, therefore, that the convulsions produced by thevetin are cerebral.

Paralysis.—That the paralysis produced by thevetin is not muscular, or due to an action on the motor nerves, is evident from the fact (already mentioned) that the muscles and nerves, after death, respond readily to galvanic irritation,—a fact, indeed, which has been so frequently observed by the writer that evidently the glucoside has little or no effect on the structures in question. The paralysis must therefore be spinal or cerebral. A series of experiments was made to determine this question, and the results obtained point to its being spinal.

Experiment 83.—Kitten. Tied all the vessels of the left leg, and at 10.23 injected one centigramme hypodermically. 11.32, paralysis ensues; 11.43, death. The right sciatic is irritated, and is found to respond equally as well as the left sciatic. Galvanic currents applied to the muscles of the right leg produce as free muscular contractions as those of the left limb.

Experiments 84 and 85 gave identical results.

The fact, again, that reflex action, after section of the cord, is lost as quickly as in the normal animal, shows that the paralysis must be spinal.

Experiment 86.—Took two frogs, of equal size, A and B. A had the cord cut high up, and was allowed to recover from the shock. After that, each received one centigramme of thevetin subcutaneously at 11.10 A.M. 11.59, reflex action is abolished in both animals, as tested by chemical stimuli and galvanic irritation. Similar experiments gave similar results. The paralysis produced by thevetin is therefore spinal.

Action on the Alimentary Canal.—*Peristalsis.*—This is influenced by thevetin, being increased to an appreciable degree. Our attention was often called to this, when, after death, the intestines retained the power to move for a considerable time. Several experiments were performed on cats, dogs, and rabbits, by either giving the poison subcutaneously or intravenously, and then looking at the abdomen, or by opening the walls of the latter, watching the movements of the intestines themselves, to see if this action of the drug was constant. It was always found that intestinal peristalsis was considerably increased.

Vomiting.—To determine whether the vomiting produced by thevetin was the result of an irritant local action on the stomach,—i.e., on the mucous membrane,—or whether it was due to reflex excitation of the centres in the medulla oblongata, a series of experiments was instituted, by tying the aorta of various animals, and thus endeavoring to prevent the drug from entering the stomach. For example:

Experiment 87.—Dog. Tied the abdominal aorta at 4.50 P.M., and then injected, subcutaneously, three-quarters of a centigramme of thevetin. Salivation appeared at 5, but no other marked symptoms were observed for a considerable time. 6.6 P.M., vomiting occurred.

Experiment 88.—Dog. The aorta was tied just as it passes through the diaphragm, and at 10.53 A.M. injected, hypodermically, one centigramme. 11, salivation begins to take place rapidly; 11.8, vomiting occurs.

Experiment 89.—Kitten. Tied the artery, and administered one centigramme at 2.48 P.M. 3.5, the animal died in great dyspnoea. There was no vomiting, owing, perhaps, to the rapid action of the drug on the heart and the respiration, producing death before the other effect could take place.

Experiment 90.—Dog. The ligature was placed around the aorta just as the artery leaves the diaphragm. At 11.34, injected under the skin one and a half centigrammes of thevetin. 12.40, very profuse salivation occurred, followed by vomiting.

After all, these experiments were not

very successful, because, in all the animals operated upon, on post-mortem examination it was found that some little vessel was still in communication with the stomach, by which, probably, some of the poison might have had access into the viscus, and thus have interfered with the complete success of the experiment. If the experiments prove nothing else, they show, at least, that the operation which must produce a great shock does not control the emetic action of the drug.

On the Temperature.—Like many other drugs, thevetin lowers the temperature. To show the range of its influence, the following experiment is detailed:

No. 91.—Dog.

Time.	Dose.	Temperature, C. scale.	Remarks.
11.28.30	$\frac{1}{2}$ centig.	39.3	Subcutaneously.
31		39.25	
36		39.12	
47.30		39	
12.47		39.3	

Action on the Pupil.—A series of experiments was made expressly for the purpose of determining the action of the drug on the pupil, with the following results:

The pupil undergoes no change, as already stated, when thevetin is administered subcutaneously or into a vein. If the drug, however, is applied locally, it produces an intense conjunctivitis, and it is then that the pupil contracts,—due, of course, to a reflex irritation.

Action on the Glandular System.—One of the most marked effects of thevetin is to stimulate the salivary glands, and thus largely increase their secretion. This usually happens, as already seen, when the drug is injected hypodermically or directly into the circulation; so that the increase cannot be due to a local action of the drug. It is probably the result of an action on the chorda tympani nerve. If thevetin had any action on the cutaneous glands, it was not noticed, as such is not easy to observe in the animals experimented upon. The biliary secretion does not seem to be affected by the poison, as there were no marked lesions observed on post-mortem examination. Nothing can be said, at present, as regards any of the other secretions.

CONCLUSIONS.

A résumé of all the conclusions arrived at will now be given:

I. Thevetin is a very powerful poison,

the minimum fatal dose in the common frog (*Rana esculenta*) being $\frac{1}{10}$ of a centigramme.

II. Thevetin produces death by asphyxia and by cardiac paralysis, more frequently by the former.

III. Thevetin is an irritant when locally applied to the skin, giving rise to a peculiar burning sensation.

IV. The diminution in the number of heart-pulsations produced by thevetin is due to its action on the cardiac muscle. The poison seems to have no action on the pneumogastrics.

V. The arterial pressure is increased by an action of the drug on the heart itself,—*i.e.*, by a stimulating action on the intracardiac ganglia.

VI. The primary acceleration in the number of respirations produced by thevetin is due to excitation of the centre in the medulla oblongata, the subsequent decrease and the final cessation of the respiratory movements being due to an action on the functional nerves, and also probably to an action on the muscles of respiration particularly.

VII. The convulsions produced by thevetin are cerebral.

VIII. The paralysis produced by the poison is spinal.

IX. As sensation is lost before voluntary movements, and as the nerves remain intact after death, it is evident that the abolition of reflex activity is of spinal origin, and is dependent upon an action of the drug on the sensory tract of the cord.

X. Thevetin increases intestinal peristalsis.

XI. Like most other drugs, thevetin lowers the temperature.

XII. When locally applied, thevetin produces contraction of the pupil, due to peripheral irritation.

XIII. In thevetin-poisoning the salivary is the only secretion markedly increased.

In concluding this paper, I desire to tender my grateful acknowledgments to my compatriot and friend Dr. Plutarco Ornelas, for furnishing me with the drug and for many words of encouragement, and also to my distinguished friend Dr. B. F. Lautenbach, under whose supervision the experiments were made, for much valuable assistance.

PHYSIOLOGICAL LABORATORY OF THE UNIVERSITY OF PENNSYLVANIA.

DISLOCATION OF THE WRIST WITHOUT FRACTURE.

BY OLIVER ROLAND, M.D.,

Lancaster, Pa.

THIS accident occurred in the Children's Home in this city.

Morton McKenney, a boy about 12 years of age, fell from a ladder on which he was playing (a distance of five or six feet), striking on the back of his right hand, which was flexed at the time. He felt a sharp, severe pain when he struck the ground, and, on getting up, found he could neither move nor extend his hand in the least. He was taken to the infirmary of the Home, and I was at once sent for. Upon making an examination, his right hand was found flexed at a right angle with the forearm, and the fingers flexed upon the palm. The hand was held so firmly in this position that it could not be straightened even when considerable force was used. There was no swelling, and no pain unless efforts at extension were made, and crepitus could not be obtained after a careful examination. The flexor tendons were rigid and cord-like; the radius and ulna projected in front, and the articulating surfaces could easily be felt, while the carpal bones formed an irregular tumor in front;—from which symptoms, as well as the subsequent course of the case under treatment, a forward luxation of the wrist was diagnosed.

I had the boy etherized, but, before he was completely relaxed, in some struggling efforts he made the bones suddenly slipped into position, with the usual sensation and sound accompanying the reduction of dislocations. There was now no tendency to a relaxation, though the hand was moved in all directions. As such movements, however, caused some slight pain, a palmar splint was applied and continued in place for four days, more as a precautionary measure than for any other reason. A day or so after its removal, I found the boy playing on the same ladder from which he had fallen: this certainly he could not have done had there existed a fracture. It is now more than a month since the accident, and during all this time there has not been any trouble in the joint.

Remarks.—Though this accident was regarded by the older writers as a not unusual occurrence, we believe that, at the present time, all surgical authors speak of it as rare, exceedingly rare, etc.

Hamilton ("Fractures and Dislocations") gives Francis L. Parker, Professor of Anatomy in the Medical College of South Carolina, as authority for stating that there are but seven cases on record that are free from all objection,—*i.e.*, that

may be classed as simple uncomplicated dislocations; while Dupuytren, who almost absolutely denied its existence, considered the ligamentous and fibrous construction of the joint to be of such strength that a fracture would almost invariably occur before a laceration sufficient to permit a luxation.

It has been, therefore, chiefly on account of its rarity that the above case was judged to be of sufficient interest to report.

TRANSLATIONS.

THYMIC ACID AND THYMATE OF SODIUM: THEIR INTERNAL AND EXTERNAL USE.—

Dr. Alvin states that for a year past he has substituted thymic acid for carbolic acid in preparations intended to exercise a caustic, alterative, or simply astringent action on the pharyngeal and laryngeal mucous membranes. These preparations, much better tolerated, of a more agreeable taste, and quite as active as those of carbolic acid, have given him the most satisfactory results. The following formulæ are among those used by Dr. Alvin:

SOLUTIONS FOR APPLYING TO THE MOUTH AND THROAT.

1. Caustic.

a.—R Acid. thymic. cryst., pt. 1;
Glycerinæ puræ, pts. 2-4.

b.—R Acid. thymic. cryst., pt. 1;
Iodini, pt. 1;
Potassii iodidi, pt. 1;
Glycerinæ puræ, pts. 5-15.

2. Alterative.

a.—R Acid. thymic. cryst., pt. 1;
Glycerinæ puræ, pts. 50.

b.—R Acid. thymic. cryst., pt. 1;
Iodini, pt. 1;
Potassii iodidi, pts. 1-2;
Glycerinæ puræ, pts. 120;

c.—R Acid. thymic. cryst., pt. 1;
Tannin, pt. 1;
Glycerinæ puræ, pts. 100.

3. Astringent.

R Acid. thymic. cryst., pt. 1;
Glycerinæ puræ, pts. 500.

Pastilles.

R Thymate of sodium, 1 milligr. (gr. $\frac{1}{16}$).

These pastilles are useful in superficial stomatitis, irritation of the upper air-passages, and erosion of the mucous membrane

in smokers, and they are very useful in quieting spasmodic cough. They should be made trial of in whooping-cough.

R Thymate of sodium, 1 milligr. (gr. $\frac{1}{16}$);
Chlorate of potassium, 10 centigrs.
(gr. $1\frac{1}{2}$).

In severer forms of stomatitis, amygdalitis, pharyngo-laryngitis.

R Thymate of sodium, 1 milligr. (gr. $\frac{1}{16}$);
Borax, 10 centigrs. (gr. $1\frac{1}{2}$).

Ulcerative stomatitis and amygdalitis.

These proportions are, in each case, for a pastille of sixteen grains; they may be taken to the number of six to ten daily, and have the advantage of overcoming, to a greater or less degree, the putridity of the parts diseased.

In pulmonary affections the following formula has proved useful:

R Sodii thymat., 1-4 centigrs. (gr. $\frac{1}{4}$ - $\frac{1}{2}$);
Syrupi simplicis, 60 grammes (3xv);
Aqueæ, 100 grammes (3iv).

Sig.—Take in the course of twenty-four hours.

As thymic acid is often found impure and more or less inert, the crystallized form should always be used. It is a strong caustic.—*Bull. Gén. de Thérap.*, April 15, 1879, p. 320.

PELLETIERINE AS AN ANTHELMINTIC.—Dr. Béranger-Féraud refers to his previous writings on the anthelmintic action of pomegranate bark in the *Bull. Gén. de Thérap.* of November 15, 1878. He now gives the results obtained from the use of pelletierine, the alkaloid derived from this bark. The alkaloid manufactured by M. Ch. Tanret reached him in the form of a syrup of the sulphate. It was given in doses of fifty centigrammes (eight grains), mixed with a quantity of water, and was swallowed in divided portions in the course of ten minutes, the patient lying quietly in bed. Two hours later, thirty grammes (one ounce) ol. ricini were given in emulsion, followed, when no stool was produced, by an enema. Twelve cases were experimented upon. In one case sulphate of sodium was used instead of ol. ricini. Féraud's conclusions are as follows. First, as to the physiological action of the drug, Tanret (*Bull. Gén. de Thérap.*, 1878, t. xciv. p. 455) found that pelletierine, in the dose of fourteen centigrammes (two grains),

caused merely a slight abatement in the pulse and some dizziness for ten minutes. At the dose of forty centigrammes (six grains), rising to sixty-five centigrammes (ten grains), the symptoms were toxic. For this reason the alkaloid should not be given to women or feeble persons in larger doses than forty centigrammes without caution. The symptoms, as noted by Féraud, are vertigo; a mist before the eyes; heaviness of the eyelids; occasionally diplopia; cramps in the calves and forearms; tingling in the fingers and toes; occasionally nausea and vomiting. Pelletière is less disagreeable to the stomach than pomegranate bark. Occasionally, however, it gives rise to vomiting. It has no purgative action; on the contrary, it tends to constipation. For this reason the head of the tænia is often retained for a long period, and, when passed, has been dead for so long a time that it is partly digested. — *Bull. Gén. de Thérap.*, 1879, p. 297.

ALCOHOL AS A DRESSING FOR WOUNDS. —Prof. Maurice Perrin, in an article on the comparative value of alcohol and Lister's dressing, concludes with the following general view of the mode of action and manner of employing the alcohol dressing. Without being a panacea, alcohol presents a perfect antiseptic treatment, and one in the highest degree available for the purposes of conservative surgery. Under its influence the deepest contused wounds, compound fractures, where there are clots and detritus of all sorts,—as in gunshot injuries,—lose their exceptionally grave character; they have no more smell than of ordinary recent maceration; local reaction is diminished, sometimes it is absent. That tumefaction of the soft parts in the neighborhood of the wound, that production of gas, which is the ordinary prelude of the gravest accidents, does not show itself. Slightly painful on its first application, alcohol soon gives a sensation of agreeable refreshment; suppuration is infrequent and slight; erysipelas is of very rare occurrence; traumatic fever is very slight, the thermometer not often rising above 38° (100.5° F.).

It must be admitted that the pale, flabby, macerated appearance of a wound treated with alcohol is not attractive; this, however, is of little moment. The alcohol used is of 80° strength; at first applied

pure, later mixed with an equal bulk of water. In operations, no extraordinary precaution beyond extreme personal cleanliness is required. Before the patient recovers from the anæsthetic, the bleeding surface is impregnated with pure alcohol by the aid of a tampon of cotton. This sort of maceration is continued until all bleeding has ceased, the wound putting on a uniform brown tint. In deep wounds, where immediate union is hoped for, a drainage-tube is introduced, and then the edges of the wound are brought together. The whole is then covered with several layers of cotton soaked in alcohol and enveloped in oil-silk, kept in place, when convenient, by rubber rings. Occasionally, Professor Perrin subjects wounds to continuous irrigation with alcohol by the aid of the usual apparatus. — *Bull. Gén. de Thérap.*, 1879, No. 7.

ERYSIPELAS MIGRANS IN A PREGNANT WOMAN—ICTERUS—ABORTION—DEATH. —M. Arnozan reports the case of a woman subject to attacks of erysipelas, occurring at the menstrual period, who applied for relief from an attack coming on in the third month of pregnancy. The face was alone attacked, and by the end of four days the affection had entirely disappeared. It returned, however, a few days later, spread over the top of the head and down the neck behind, where large phlyctenæ appeared upon red patches of erysipelatous skin. From this time the affection followed an irregular course. Sudden remissions were followed by rapid defervescence, chills, etc., the thermometric curve showing extraordinary variations. Whenever a fresh attack came on, large, irregular, festooned patches of erysipelatous skin appeared on the back, which again disappeared as suddenly as they had come. Metrorrhagia (abortion?—Ed.) followed, and at the same time the skin became jaundiced, the discoloration growing more marked day by day, and being accompanied by progressive emaciation. The patient's condition grew rapidly worse; large livid patches appeared on the back; a bed-sore showed itself upon the sacrum. The patient sank rapidly, and died at the end of two weeks from the occurrence of the first symptoms. M. Hallepeau, who was consulted, regarded the case as one of puerperal septicæmia. The treatment was simply tonic and supporting. — *La France Méd.*, 1879, p. 234.

CONVALESCENCE.—Every disease, according to Dr. Barres, leaves behind it a condition of denutrition and hydræmia. The convalescent is not only pale and thin, but his nervo-muscular functions are shaken and his nervous impressibility exaggerated. Light, fatigue, noise,—all annoy and trouble him. Though the appetite may be good, the digestion is poor. The secretion of gastric juice is insufficient in proportion to the copious supply of food demanded. Under these conditions, it is the double object of the physician to favor prompt reparative action in the organism and, at the same time, to moderate the exercise and activity of its functions. Wine has been recommended, from the earliest times, to accomplish this object. Acting both as a plastic, a respiratory, and a conservative aliment, and on account of its density being nearer water than is brandy, it is not only more slowly absorbed, but produces the happiest effects upon the system. The best wines for the convalescent, according to Dr. Barres, are the astringent and tannated wines, which contain also sugar and alcohol in fair quantity. Of these, that of St. Raphaël is pre-eminent, containing fifteen to sixteen per cent. of alcohol, while Bordeaux contains but eight to nine, and Burgundy eleven to twelve.—*La France Méd.*, 1879, p. 231; from *L'Union Méd.*

MILIUM IN THE SKIN OF THE FACE OF NEW-BORN INFANTS.—Kustner (*Cbl. f. Med.*, 1877, p. 927; *Med. Times*, January 19, 1878) called attention to those small, white nodules (miliun) found on the face of infants born before full term, which he considered significant of immaturity. A. Epstein now comes out in an article denying the validity of this sign. Not only has he found the profuse eruption of miliun more frequently in children born at full term than in premature infants, but, in a case of twins, one presented these nodules profusely scattered over the face, while the other showed only a very few. Epstein also objects to the term "comedo" used by Kustner, as this is really a plug in the gland, whereas true miliun, as found in infants, is a white, pearly nodule, the gland being completely covered with epidermis. Epstein explains the occurrence of miliun by the profuse secretion of sebaceous matter which takes place during intra-uterine life, and which, as is known, accumulates on the surface of the skin,

clogging up the glands, whose outlets, when plugged up by epidermis, form the miliun.—*Cbl. f. Chir.*, 1879, p. 155; from *Centr. Zeitung f. Kinderheilk.*

ANGINA SCORBUTICA.—G. Pinder gives a case of scurvy where, as the characteristic swelling of the gums appeared, the mucous membrane of the posterior wall of the pharynx showed characteristic changes, of two kinds. There were millet-seed-sized elongated excrescences scattered here and there over the surface, darker in color than the surrounding mucous membrane, and in considerable number. There were also hemorrhagic patches in the mucous membrane, often covered with yellowish crusts. In other cases the little excrescences were spread over the back of the throat; in these cases the mucous membrane seemed always lighter, drier, and shining. When these growths came away, scorbutic ulcers were left, with the borders infiltrated with blood and a bleeding, uneven bottom. The inward treatment was on the usual anti-scorbutic plan. The ulcers were thoroughly canterized with nitrate of silver.—*Cbl. f. Med.*, 1879, p. 143; from *Wien. Med. Wochens.*

SINGLE KIDNEY.—At the autopsy of a patient who died in December, 1878, in the service of Dr. Crocq, in the Brussels Hospital, from the effects of typhoid fever, a rare anatomical anomaly was observed. This patient had but one kidney,—the left. This single kidney, however, was very large, weighing four hundred and twenty grammes, and occupying the ordinary position in the abdominal cavity. The right kidney was represented by a mass of connective tissue the size of an almond. The right renal vein and artery were only rudimentary, and were fused to this mass of connective tissue. The left renal artery and vein, on the contrary, were greatly developed, and the left ureter was much enlarged, while the right was quite small. There had been no urinary difficulty during life, the left kidney having satisfactorily performed double duty.—*Le Mouvement Méd.*, 1879, p. 161.

RECENT inquiry has shown that no fewer than eleven hundred and fifty-nine lives have been lost by accidents in the London streets during the past ten years, whilst the number of injuries during the same period is returned as twenty-three thousand three hundred and seventy-nine.

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, JUNE 7, 1879.

EDITORIAL.

BE VIGILANT.

WE do not propose to-day to reiterate the farcical history of the medical college convention which we published in our last issue. It does seem, however, fitting to reiterate the lesson which is yearly taught by the successive chapters of the history of the associated medical colleges and similar organizations,—a lesson which, notwithstanding every effort is made to obscure it, remains so plain that he who runs can read.

The hopelessness of reform through combined effort of the colleges is but too apparent; scarcely less apparent, also, is the attempt which is being made by many to hide or avert personal responsibility by crying loudly for conjoint reform. The medical faculties or the medical schools that desire reform strongly enough to be willing to suffer somewhat for it are the only ones who really desire it at all, and such medical-teaching bodies will go forward, as the University of Pennsylvania is and has been doing, entirely irrespective of what other schools do, and only cautious not to injure the cause they have at heart by attempting such sudden action as to cause absolute ruin.

Until this point of being willing to risk something is reached by any faculty or board of trustees, such faculty or board ought to be held responsible by the profession for maintaining a second-class medical college. Only by eternally holding up to public gaze; only by blowing away continually the dust that is being raised by conventions, reforms that mean nothing, and the other devices that are becoming so fashionable, and showing

continually the naked barrenness of the thing itself, can that public opinion be generated that will at last make any man of high professional aspirations ashamed to be connected with these doctor-factories. Just so soon as professional opinion reaches such an intensity (which it will eventually reach) that it is a serious disgrace for a man to be connected with such colleges as are represented so largely in the Association of American Medical Colleges, just so soon will wide-spread reformation come.

CORRESPONDENCE.

LONDON LETTER.

AMIDST the varied relations of the profession there is none more curious than that of consultants and chemists, and especially chemists' assistants. What earthly collocation there can possibly be betwixt a London consultant and a chemist's assistant is not by any means, at first sight, very apparent; indeed, after some little study the matter remains as obscure as ever. Of course it is in human nature for assistants in chemists' shops to recommend any consultant who is known to them by repute, or who is in the habit of sending his patients to the shop in which they serve. Of course it is easily comprehensible that a chemist's assistant is more familiar with a man's name for the latter than the former reason. Enterprising chemists' assistants doubtless read the *Lancet*, the *British Medical Journal*, etc., but it may be questioned how far they are fitted to form a judgment on the merits of the different papers and communications contributed thereto. Possibly enough they recognize whose names are most commonly seen there, and with what subjects these names are associated; so that they have some acquaintance with certain names in connection with certain specialties. So far unobjectionable! It is very natural, too, that they should be familiar with the names of consultants whose prescriptions are constantly in their hands; and if any one casually drops in to ask, "Who is the man to consult for so-and-so?" it is but human nature that they should name some one whose prescriptions often come their way. But the matter does not stop there.

It may be interesting, but I hope sincerely not instructive, to your readers to know how the chemists' assistants' advocacy is systematically cultivated by certain astute men in the profession. The inhabitants of the United States of America are generally credited with

considerable shrewdness and capacity to see their way, but it is to be hoped that they have not got on to the tracks which I am about to describe. Many persons who do not know anything about consultants, and yet who wish to consult some one for some ailment or disease with which they are afflicted, think the readiest and surest plan is to drop into some well-known chemist's shop and ask who is the best man to see for such-and-such a complaint. The quiet, innocent-looking youth who is so interrogated immediately raps out some consultant's name. Unsuspecting and confiding, the inquirer goes away with the impression that he has just done a very wise thing, and congratulates himself on the cleverness of his manœuvre. In full trustingness he goes to this consultant. That he has been hoodwinked and sold thoroughly is an idea which does not flit across his mental horizon, and in the bulk of cases the game is never detected, and the satisfied inquirer recommends others to go and do likewise when they wish to know about consultants. There are two ways in which this thing is worked,—the negative plan and the positive plan. To take the negative plan first: many consultants (of whom I am one) do not recommend any chemist in particular, feeling it more straightforward to say to the patient, if asked to whom the prescription should be taken, "Take it to any good chemist; I do not recommend any one in particular." The patient can then go to any chemist he pleases, and feels there can be no secret understanding betwixt prescriber and dispenser. It might, perhaps, be better policy in self-defence, in the future, to indicate one or two, but the plan has not yet been adopted by me; consequently the young men in certain fashionable shops are probably but little familiar with my name, and, as said before, their acquaintance with consultants' names is rather through the prescriptions they dispense than their familiarity with medical literature. Some little time ago the dispenser of the Leeds Public Dispensary, being in town, was led to consult me about himself. He had known me since I occupied the post of Senior Resident Medical Officer to that institution. We had seen each other several times since I planted the tent-pole in London, but he found, when arriving in town, that he had not got my address with him; this he thought a matter of little moment, as he could call at any chemist's and procure it. Accordingly, he called in at a very well-known chemist's shop in Bond Street and asked for my address. Somewhat to his surprise, he was assured, in the most confident manner imaginable, that "there was no such medical man in London as Dr. Milner Fothergill; he must be quite mistaken!" What was his complaint was then asked him by this youthful young sprig of rascality; but he saw the little plant, and marched off, as he said, to the first tavern, where there was a Post-Office Di-

rectory, where, of course, he found the information he sought without the slightest difficulty. I venture to think (without being chargeable with much egotism and self-conceit) that that promising youth probably was conscious, or ought to have been, that he was telling a deliberate untruth.

Amusing stories are told of persons from curiosity calling at a series of chemists' shops and inquiring systematically at one after another as to who was the man to consult, say, first, for syphilis. "Mr. Zanoni Innocent" was the answer at once given. At the next, "Who is the man to consult for a stricture?" "Mr. Zanoni Innocent" again is the response. At a third, "Who is the man to see about hemorrhoids?" "Mr. Zanoni Innocent." Going a little farther, the inquirer calls at another shop, and asks, "Who is the man to see for heart-disease?" altering his tack; still the same answer, "Mr. Zanoni Innocent." It seems pretty clear to him by this time that there must be some especial reason for this wide-spread confidence in Mr. Zanoni Innocent on the part of chemists' assistants; but of course how it has been brought about is a mystery which cannot very easily be cleared up.

So far there has been nothing very flagrant described; but the game does not stop at this point. Chemists' assistants, especially those who are in fashionable shops, are probably like the rest of humanity, a mixed lot. They wish to push themselves forward in the world, and keep a pretty sharp eye on the main chance,—otherwise, their personal interests. Some, doubtless, are less scrupulous than others; and I venture to think few readers will hesitate about forming their opinion on this matter, that the thing is carried just a little too far when it has reached the following point. A patient, having consulted a physician about his chest, takes the prescription to a well-known chemist's to be dispensed. English people attach, usually, great importance to the prescription, which they think the chief consequence or outcome of a medical consultation; therefore many go with their newly-acquired fetish to some famous, well-known chemist's shop. They know they will have to pay a long price; but then they regard that as a substantial guarantee of the quality of the medicines, and of the care with which the prescription will be dispensed. The youth to whom the prescription is handed looks at it sardonically, and remarks contemptuously, "For piles?" Of course the patient is very much taken aback at this, and exclaims, "Bless me! no! For bronchitis!" The youth has achieved his end, and the surprised and startled patient's confidence in the man he has just consulted is irrecoverably shaken. That he should have got a prescription for piles when he went about his bronchitis, comes to him as a very unpleasant revelation. It is not only that he has spent

his money in vain, but that he has been cheated into risking his health, and possibly ruining his constitution, by having the wrong medicine prescribed; the thought is very shocking that he should thus have been trifled with by ignorance or carelessness. In the midst of his perturbation he gasps out, "Who is the best man to consult about bronchitis?" The placid answer is, "Oh, Dr. Vitreous Tendon, of course!" The deed is done; an assassin-like stab has been given to the reputation of an inoffending man, and the young scoundrel chuckles at the skilful manner in which the blow has been delivered. The patient goes away wrathful and indignant that the doctor he had just consulted should have treated him so badly, and vows with genuine earnestness that he himself will never consult him again; "No; nor, by Jove, shall anybody I know consult him either, if I can help it!" Away he goes, circulating the story among his acquaintances, getting this unlucky physician a bad name so far as he can. Now, this is certainly diabolical wickedness; and the apparent artlessness with which it is done disarms all suspicion. That the chemist's assistant had any motive other than of saving him from taking a medicine unsuitable if not possibly dangerous, any ulterior design in his apparently friendly action, never crosses the victim's imagination. It is the apparent innocence of the scoundrelism which is at once its strength and its protection. The utter guilelessness of the ingenious surprise of the young man behind the counter "fetches" the victim, who never detects the trap that is so skilfully laid for him. That that young villain, that moral assassin, is "squared," there can be no doubt; and possibly enough he does not realize the injury he is doing to the unoffending physician to whose reputation he has delivered a nasty stab; but he does it all the same, and as effectually as if his conduct had been inspired by the most deliberate malice. He wished to put a fee into the pocket of Dr. Vitreous Tendon, that was his main object; we will hope, for the sake of humanity, that he does not realize the injury he is doing to another man. A less indecent but equally effective plan is for the chemist's assistant to have three names on a card, and when asked about whom to consult, he declares his inability to decide, until the question is put home to him, "Whom would he consult, if necessary?" He then mentions the lowest name on the list. The apparent absolute *bona fides* of this crafty villain allays any possible suspicion of "a plant" which might arise in the mind of the sold individual, and the inquirer goes away perfectly satisfied.

It is quite time that this little arrangement should be "blown upon;" for it is impossible to avoid slang terms when alluding to such an improper proceeding, whose demoralizing tendency is so obvious. By what underground communication the chemist's assistant

is rewarded for his share in the unholy compact has not yet transpired; but it is quite obvious some arrangement does exist.

Of course no one objects to a man giving a friend a "boost" when it can be fairly done; but to do it in the cut-throat manner just described is grossly unjust to those who must necessarily and unavoidably be injured by this cold-blooded wickedness. There can be no objection taken to a man's pushing on in the world if he only fairly respects the interests of others; but the enterprise of men like Mr. Zanoni Innocent and Dr. Vitreous Tendon scarcely allows for one's duty towards one's neighbor; it is selfishness run riot; it involves the shattered, or at least assailed, reputations of others, over which these men essay to clamber into repute. It will be easy for those who can scarcely credit the fact that such iniquitous arrangements can exist to disbelieve what is here written; and doubtless the chemists' journals will resent what is here said when this comes under their notice; but that will not alter the facts. Doubtless these journals will blush to think that such deeds can be done by chemists' assistants in shops of repute otherwise, and will cast doubts upon the statements here made. How much more discredit, then, will lie at the door of members of a reputable profession who have stooped to "put up" such a game! It is at once degrading and demoralizing to those engaged in it, and reflects discredit on two respectable sections of the community. But how consultants on the one hand and chemists' assistants on the other are to prevent such arrangements among "black sheep" it is impossible to see, unless it be by combined expressions of disapprobation of such proceedings and arrangements.

In striking contrast with men who could stoop to the degrading schemes just detailed is the career of the late lamented Dr. Charles Murchison. He was at a medical conversation less than forty-eight hours before his death, looking as well as he has done for some years past. Grave, serious, and thoughtful was his expression, for he was the subject of serious aortic incompetence, which he knew well might prove fatal at any time. Dr. Murchison was related to the late Sir Roderick Murchison, of geological repute. He commenced his student career in 1846, which was one of unusual brilliance. He entered the East India Company's service, and there saw a great deal of fever and the disease of the liver, which attracted much of his attention in after-life. After this he came to London and commenced practice. To show how multifarious was his knowledge, in India he was a professor in chemistry; in London he became a demonstrator of anatomy, a lecturer on botany; he was assistant-physician to a general hospital as well as to the Fever Hospital. He became lecturer on pathology, and for four years was honorable secretary of the Pathological So-

ciety, where he performed his duties so efficiently that he was made president of the society in 1877, unusually early. His famous work on "The Continued Fevers of Great Britain" appeared in 1862, after two years' experience at the Fever Hospital. He translated Frerich's "Clinical Study of Liver Disease" for the New Sydenham Society, and subsequently, in 1873, he delivered the Croonian Lectures before the Royal College of Physicians, on the Functional Derangements of the Liver, which are replete with the most interesting and instructive matter. These were comprised in a work written later on, entitled "Lectures on the Diseases of the Liver." During this time he was Examiner in Medicine to the University of London, while he was actively interested in the spread of disease, tracing out the Marylebone outbreak of typhoid fever, spread by milk, in 1872; indeed, doing a thousand and one things besides conducting a rapidly increasing practice. All this, too, was done by a man with serious aortic disease. He was Lecturer on Clinical Medicine and Physician to St. Thomas's Hospital, where his thorough and vigorous teaching of clinical medicine will not readily be forgotten. He followed very much in the steps of his teacher, the late Professor John Hughes Bennett, of Edinburgh, in his form of teaching. The student was driven at the case, and no turning or twisting could release him from the searching cross-examination to which he was subjected. His knowledge (or ignorance, as the case might be) was thoroughly tested in an apparently merciless manner. But the student never forgot teaching of this sort.

Some years ago, when first coming to London, I attended Dr. Murchison's class several times as a student, and shall never forget the example he made of a student who diagnosed vesical calculus, but who could not give his reasons for his diagnosis. He, however, knew something about the subject before the doctor was done with him. On asking the victim, after the round was over, how he liked the performance, he admitted it was scarcely pleasant, but affirmed it was very instructive. He said that, unfortunately, he had been told what the case was without being informed how the diagnosis was made, and Dr. Murchison's suspicions being aroused, he was doubly strict in his cross-examination. But with all this apparent indifference to the feelings of others, which was genuine enough with the late Professor Bennett, there was a great deal of kindness; and Dr. Murchison kept in his waistcoat-pocket a card on which were written the names of those who were willing to be so cross-examined. He did not pitch upon a man promiscuously and then rake him with questions; he first asked if he might put his name down on his list, and then looked over his list before he selected his victim.

No more honorable name is there on the

roll of illustrious British physicians than that of Dr. Charles Murchison. He knew what was to befall him, and worked away cheerfully and persistently till the summons came. It came at last, and found him in the midst of work. He had just seen the last of his patients out of his consulting-room, and apparently had stooped to pull a drawer from his writing-table, when he fell dead. He knew about his disease since 1871, yet what a life of energetic industry he led! The amount of work he accomplished would seem a very herculean task for a man in the fulness of his health and strength. His house is closed, but, sad as the story is, it is far less distressing than the closure and sale of the house of another well-known member of the profession in the same neighborhood. Here the savings of a lifetime were swept away in one of the numerous bank-failures which we have had of late, and complete prostration of mind and body followed.

J. MILNER FOTHERGILL.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, FEBRUARY 27, 1879.

THE PRESIDENT, DR. H. LENOX HODGE, in the chair.

Calculus of right and double ureter of left kidney. Presented by DR. M. LONGSTRETH.

DR. MORRIS LONGSTRETH read the history of this case, taken from the clinical records of the Pennsylvania Hospital, as follows:

A woman, æt. 49, widow, admitted January 7, 1879, injured her back by falling down-stairs on the morning of admission. She had suffered four years with symptoms of calculous disease of the kidney and severe cystitis, and had passed several times small calculous masses from the bladder. Two years previously, after much suffering referred to the lumbar region, a sinus opened on the right side, near the crest of the ileum, posteriorly. The discharge from the abscess was abundant at the time of admission.

On admission, the pain and tenderness due to the injury were referred to the vertebræ of the upper dorsal region, but no displacement of the spinous processes was detected, and no crepitus could be produced or felt. There was complete inability to move the lower extremities, or to raise the trunk, or to remain in the sitting posture after being raised up. There was nearly complete loss of sensation over the lower half of trunk, and lower extremities. There was retention of urine, requiring the catheter to be used to empty the bladder. The abdomen was distended.

On the third day, she could pass urine voluntarily; had some slight control of the legs; complained of severe pain between the shoulders. After this time the lumbar abscess discharged more freely, and became a probable source of great exhaustion. On the tenth day, a bed-sore commenced forming over the sacrum, and rapidly extended in breadth and depth. Several cicatrices of old leg-ulcers broke down and discharged freely. After a fortnight, the patient's strength rapidly declined, and she died on January 27, 1879, the twentieth day after the injury. The patient was a large, strongly-built woman, and very fat.

Record of the *autopsy*, made by Dr. Longstreth, pathologist to the hospital.—The conditions of the heart and the lungs showed that the patient died mainly from the failure of respiration, and partly from exhaustion also; otherwise these organs presented nothing especial to note. The left kidney was increased in length, but not in breadth or thickness. After careful dissection, it was found that two pelves existed, each connected with a separate ureter. On separating the ureters from the collection of fat which surrounded them, they were found to unite at the brim of the pelvis, and to enter the bladder in the normal manner. On section of the kidney along its greater curvature, the two pelves were found quite distinct and separate; there was no demarcation between the two portions of the organ; no fibrous band separated them, and the same capsule passed equally over both. The portion of the organ connected with the lower pelvis—the smaller one—was uneven and lobulated, and its pelvis was very large relatively to its size. The renal tissue, the pelves, and ureters presented no morbid changes. Unfortunately, the vessels were divided before any malformation was discovered. Afterwards, in tracing its vascular supply, a large vessel, apparently a branch of the renal artery, was found entering at the hilum of the lower part of the organ in the usual manner. A small supernumerary vessel was connected with this portion of the organ, and entered its substance at the posterior surface. This branch it was thought was derived from the lumbar arteries. The vascular supply of the upper division of the organ appeared to be without irregularity. There was no peculiarity in the arrangement of the venous trunks.

The *right kidney* was surrounded by an immense quantity of fatty tissue. This organ was removed in connection with the aorta, the ureter, and the urinary bladder. The ureter likewise was surrounded by a collection of fat, measuring over an inch in diameter. On dissecting the fat from around the kidney, marked evidence of inflammation was found, and the same condition was noticed around the ureter. On section of the kidney-substance, the organ was found almost completely destroyed; its pelvis was greatly

dilated, and contained a large, irregular calculus, with a very rough surface; at the upper part of the organ was an abscess, containing very thick, purulent matter, and one or two small fragments of calculous material; at the lower part, the cavity of the pelvis reached nearly to the surface of the organ. The interior of the pelvis showed very marked alterations from inflammatory changes, and was covered with thick, creamy pus, shreds of tissue, and small calculous masses. The vascular supply to this kidney presented no malformation; the calibre of the renal artery was very much reduced in size, from fibrous thickening of its wall. A calcareous mass was found in the aortic wall, at the point where this vessel was given off. The walls of the *ureter* were greatly thickened, and its mucous surface very uneven. The *bladder* showed very marked alterations from cystitis; in parts the mucous membrane was ulcerated, and showed calcareous incrustations.

The lumbar abscess had burrowed down along the crest of the ileum, and towards the lumbar vertebrae, without, however, involving the bony tissues. The abscess did not appear to be in any way connected with the diseased kidney.

There was a fracture of the fourth dorsal vertebra involving its body. The spinal cord at this part, for the distance of an inch, had been destroyed, and its tissues were absorbed. The inner membranes of the cord were greatly thickened and much injected.

Horseshoe kidney and anomalous ureter. Presented by DR. JOHN B. ROBERTS.

Anomalies in the form of the kidney occur quite constantly, and therefore deserve a certain amount of attention from us, though they do not represent pathological changes. Sometimes we have one kidney entirely absent, while the other shows no variation except, perhaps, an increase in size; again we may have the two organs united at the lower extremities by an isthmus of renal structure extending across the spinal column, constituting what has been called the horseshoe kidney. These may have one or two ureters. The cases of fused or confluent kidney may, as is readily seen, present many variations; in fact, instances of quadruple kidney with four separate ureters have been recorded. Specimens of fusion of these organs have been presented to the Society at various times, but I believe they have not been so numerous as to render this malformed organ devoid of interest. The statement that the occurrence of renal anomalies is not infrequent I find substantiated by a list in the Transactions of the Pathological Society of London for 1861-62 (vol. xiii.), which says there were at that time nineteen specimens in the museums of London, but it is not certain from the context that these were all examples of confluent kidney. A specimen similar to the present one

will be found in the first volume of our Proceedings.

This specimen before you was taken from a subject found in my dissecting-room at the Philadelphia School of Anatomy, and therefore we know little of the man to whom it belonged. The man had evidently died from injuries, and may, therefore, be supposed to have been in good health, especially as there was no great emaciation present. My attention was called to the anomaly after the abdomen had been partly dissected; and as there occurred no good opportunity of my dissecting the kidney, ureters, and bladder very carefully, I shall furnish a rather incomplete anatomical account of the specimen. As is seen, the right kidney is large, being about six inches in length, is of ordinary form, and is attached at its lower end to a rudimentary kidney about three and a half inches long. The normal organ occupied apparently the natural position, while the other lay across the spinal column in a more or less transverse direction, with its upper extremity located upon the belly of the left psoas magnus muscle, but not extending to the left of that muscular mass. The left organ is very thin, and seems to have but little secreting structure, for a great portion of the mass is occupied by the pelves, as will be shown. The right suprarenal capsule was not seen by me, but there is a structure resembling the capsule above the small rudimentary kidney. There are many large arteries entering the hilum of the right organ, and a number of small ones going to the concave or upper surface of the left. In addition, a trunk the size of a small quill supplies the confluent organ at its lower surface where the two portions unite. Unfortunately, I am unable to say whence these vessels come. The vena cava and right renal vein are seen, with what seems to be the right spermatic vein emptying into the latter. This is also an unusual occurrence. The calices and infundibula of the right kidney open into a pelvis which is situated rather upon the anterior surface of the organ. The ureter is cut off at its commencement. At the anterior surface of the rudimentary portion of this horseshoe kidney are seen two pelves, which occupy the greater part of the front of the organ, which, by the way, has the appearance of being formed of two lobes. These pelves go downwards from the lower convex edge, and join together about half an inch distant from the point where they leave the kidney. The tube at that point is about one inch in diameter.

In order to see what was the condition of the ureters at their entrance into the bladder, since the portion intervening is lost to us, I secured the latter organ, after the subject was left by the students, and present it to the Society with the other specimen. The right ureter is of the usual appearance, and enters the bladder by a slit-like orifice; above this orifice a blind pouch runs up from the mucous

surface of the bladder alongside of the ureter for about one and a half inches, large enough to admit a lead-pencil most of the distance. On the left side there remains attached to the bladder the stump of a tube nearly one inch in diameter, which is evidently the cystic end of the large ureter formed by the junction of the two pelves of the rudimentary left kidney. This opens into the bladder by a mere slit at its bottom, similar to the orifice upon the right side. Alongside of this there is a cul-de-sac leading from the cavity of the bladder upward, large enough to admit the little finger for nearly an inch. It is certainly strange that such a large ureter should come from the rudimentary organ, while the tube is but little larger than usual on the right side, where was situated the kidney which secreted nearly all the urine.

Acute miliary tuberculosis. Presented by DR. MORRIS J. LEWIS.

Jane McD., æt. 4 months, the patient, was brought to the Children's Hospital, for the first time, January 29, 1879, suffering apparently from indigestion. The child was bottle-fed, and had been ailing since ten days old, the principal symptom being colic. Dr. Starr, who saw her first, treated her accordingly, as there was nothing to call attention to any more serious trouble.

Three days later I saw her for the first time. She was then brought back to the hospital with slight cough, which had developed in the interval. Examination revealed bronchial râles, large and small, over both lungs, anteriorly and posteriorly, and but slight, if any, change in percussion-note. She was placed upon the ordinary cough-mixture of the hospital, and the mother told to return if the child became worse. Six days later, February 7, she was brought back, with a short, hard, paroxysmal cough, which occurred at intervals of every few minutes, and which evidently caused pain, as the child cried with each paroxysm. The respiration was hurried, and examination revealed considerable impairment of resonance over right lung posteriorly, with increased tussive fremitus. Auscultation revealed slight bronchial breathing on right side, and moist râles with both acts of respiration. The left lung was the same as at last visit, except that slight impairment of resonance was detected. After this I attended the child at its home, where the following history was obtained. The child's grandmother and maternal aunt died of consumption; the mother has considered herself delicate for some years, and has had winter cough, and muco-purulent expectoration. Examination revealed a small vomica at right apex posteriorly, and crackling anteriorly. The father is a healthy man, and his family history good.

The patient was the first child, and, as the mother was unable to nurse her after the

tenth day, she was fed from the bottle. The parents considered the child moderately healthy, with the exception of frequent attacks of colic, which were attributed to the manner of feeding. She had never had convulsions, and her bowels had been moderately regular.

The child was pale and thin, with a moderately protuberant belly. The respiration was hurried, being 60 per minute, and mainly diaphragmatic, the movements of the chest being slight, and principally those of elevation, and not of expansion, the left side moving more than the right. The pulse was regular and rapid, averaging 160 per minute. Examination showed dulness over right lung from apex to base posteriorly, while anteriorly it was not so marked. Over left lung there was but slight impairment of resonance, either anteriorly or posteriorly. Auscultation revealed blowing respiration, with a few bronchial râles, and no crackling over right lung, and exaggerated breathing over left lung, with bronchial râles. Examination was made under considerable difficulties, as the child coughed incessantly, when raised from the bed, and cried when moved; the only position in which she could rest at all was upon the right side. The child's appetite was capricious, some days refusing nourishment, and again taking it with avidity.

After this the symptoms gradually became more severe, and two days before death Dr. Hopkins saw the case with me. The movements of the right chest had then almost ceased, and the lower ribs bulged slightly, while upon the left side the movements had somewhat improved. Auscultation revealed coarse crackling râles over roots of both lungs, with absolute dulness on percussion on right side. Cyanosis had made its appearance, the nails, knuckles, and forehead being very dark, and the child was in a profuse perspiration. Both eyes were turned upwards and to the left. The next day she had a slight convulsion, which was not general, and lasted a few minutes only. The following day she died, February 18, 1879. During the attack the pulse remained about 160, and the respiration 60 per minute. The temperature varied from 101° F. to 102½° F.

The autopsy was made twenty-two hours after death, with the assistance of Dr. Starr:

Decomposition commencing in abdomen. Child thin and emaciated. Head normal in size and shape; ribs bulged slightly towards lower part of chest, and there was slight beading of their anterior extremities, but no enlargement of lower end of radii. Pleural cavities contained no abnormal amount of fluid; some few adhesions, not firm, existed upon right side posteriorly, none on left. Mediastinal glands enlarged. Right lung hepatized and non-crepitant, sinking in water, its pleura studded with numerous miliary tubercles about the size of a grain of sand. Upon section, numerous cheesy deposits were seen.

Towards lower part of upper lobe, posteriorly, a cavity was found, measuring about three-quarters of an inch by an inch, and filled with broken-down cheesy material. Left lung but slightly congested, floating in water, its surface covered with distended vesicles, particularly over upper lobe, and studded with tubercles. At lower part of upper lobe a cavity smaller than that on the right side was found. On section, some few cheesy deposits. No tubercles could be detected on costal pleura. Pericardium contained a small amount of serum. Heart firm and apparently normal. No tubercles seen. Liver somewhat large, free from adhesions, and studded with miliary tubercles upon both its upper and lower surfaces, varying in size from a grain of sand to a head of a pin. Spleen large, adherent over small area by fresh lymph to abdominal wall, and studded with tubercles, some of which were as large as half a grain of rice. Kidneys apparently healthy. Intestines studded here and there with solitary tubercles, especially over ileum, and one or two small ulcers were detected, having the position of Peyer's patches. Mesenteric glands enlarged. No tubercles discovered on parietal peritoneum. Unfortunately, no examination of the head was allowed.

REVIEWS AND BOOK NOTICES.

A PRACTICAL TREATISE ON SURGICAL DIAGNOSIS; DESIGNED AS A MANUAL FOR PRACTITIONERS AND STUDENTS. By AMBROSE L. RANNEY, A.M., M.D., Adjunct Professor of Anatomy and Lecturer on Minor Surgery in the Medical Department of the University of New York. 8vo, pp. 386. New York, William Wood & Co., 1879.

With the exception of Macleod's "Outlines," published simultaneously in England and in this country in 1864, this is, so far as we know, the first monograph ever issued on surgical diagnosis. The subject is one of such interest and importance that one may well wonder at its having been thus avoided by writers; but the success of Macleod's work did not, we believe, warrant a second edition.

The volume before us is handsomely gotten up, with good type and paper, but an examination of its pages has sadly disappointed us. The tabular arrangement of the material makes the book unreadable, and many of the statements are so singularly vague that we confess our inability to unravel their meaning. For example: Dr. Ranney says of fissures of the skull, "if the scalp or periosteum be not involved, in that case the symptoms of a possible complicating hemorrhage of the meninges of the brain, or the development of symptoms of local abscess within the skull at the seat of injury, might give grounds for a reasonable conjecture" (p. 140).

Again, in speaking of fractures of the hip: "We may safely exclude all fractures of the pelvic bones from the causes of error in diagnosis of injuries received in the region of the hip-joint, provided no evidences of previous disease are present, since, if the fracture of these bones be severe and extensive, the location of the crepitus and symptoms referable to the pelvic viscera will easily remove all doubt. Should the fracture be of a local character, however, and not of the comminuted variety, it is often impossible to either positively diagnose the existence of a fracture or to locate its situation, provided even that crepitus be obtained" (pp. 179, 180).

Of aneurismal varix we are told: "The patient is conscious of the peculiar fremitus, which affects the sleep and leads also to the belief that an insect is imprisoned" (p. 21).

These extracts are taken at random, and are fair samples.

In the Introduction, which is more properly a mere preface, we find our author making the extraordinary statement, "I have avoided, as far as possible, all points on which argument is demanded or from which serious error is liable to follow." Perhaps this may explain why he has omitted all mention of sounding as a means of diagnosis of stone in the bladder; why he wholly ignores the nose, air-passages, eye, and oesophagus; and why he says nothing of gunshot-wounds.

What is really wanted, and what we hoped to find in this book when we took it up, is a treatise analogous to those of Da Costa and Barclay on the medical branch of the subject, in which the means of diagnosis, the methods of employing them, and the significance of their revelations should be fully set forth. A bare tabulation of distinctive features of disease may sometimes save a lazy man the trouble of consulting authorities, but no earnest student or practitioner can find it satisfactory.

We honestly think that, had the author's private classes known just what sort of a volume this would be, they would not have requested him to publish it. P.

THE AMERICAN JOURNAL OF OTOTOLOGY: A QUARTERLY JOURNAL OF PHYSIOLOGICAL ACOUSTICS AND AURAL SURGERY. Edited by CLARENCE J. BLAKE, M.D., in conjunction with Prof. A. M. MAYER, of Hoboken; Dr. ALBERT H. BUCK and Dr. SAMUEL SEXTON, of New York; Dr. C. H. BURNETT, of Philadelphia; Dr. J. ORNE GREEN, of Boston; and Dr. H. N. SPENCER, of St. Louis. Vol. I., Nos. 1 and 2, January and April, 1879. New York, William Wood & Co.

The object of this most recent addition to our special medical journals is twofold: first, to afford a medium for the publication of memoirs relating to acoustics; second, to present papers upon practical otology in its widest

sense. An inspection of the title-page shows how well this double object is likely to be attained, for on the one part we have the name of Professor Mayer, the distinguished physicist, and on the other the names of a group of aural surgeons all well known as active in their special branch and as contributors to the literature of the subject. An examination of the two numbers already issued shows the promise of the title-page well borne out by an array of valuable contributions, ranging from such articles as that upon "Proposed Methods of Measuring the Relative Intensities of Sounds" to the "Treatment of Inflammation of the External Auditory Meatus." There are also in each number careful book notices, and a thorough and complete review of current otological literature. Finally, the literary make-up of the journal is handsome and attractive, and it presents itself with an assured carriage, as if it knew its own value and "had come to stay."

ELEMENTS OF COMPARATIVE ANATOMY. By CARL GEGENBAUR. Translated by J. JEFFREY BELL, B.A. Translation revised by E. RAY LANKASTER, M.A., F.R.S.

This work appears to us to be the best of its kind in the English language: thorough and full of the modern scientific spirit, it represents completely the knowledge of the present, and, whilst good as a hand-book for students, it may serve for a guide to the profession.

THE American Health Primers, edited by Dr. W. W. Keen, are a series of small volumes to be offered to the lay public at the price of fifty cents each. Whilst the enterprising publishers, no doubt, hope to earn lucre, practically the effort is allied to a missionary enterprise, and as such we wish for it success. If the other volumes be as good as the first, which is just out,—namely, "Hearing, and How to Keep it," by Dr. Charles H. Burnett, of this city,—the array will be a very striking one.

PART III. of *Klein's Atlas of Histology* has been received. The punctuality of its appearance seems to equal the merit of this remarkably excellent publication. The plates of the present number illustrate fibrous, connective, and adipose tissue, pigment cells, formation of capillary vessels, and cartilage. In accuracy and in artistic qualities they are the equal of those previously published.

DANGER OF VULCANIZED INDIA-RUBBER NIPPLES.—An item is going the rounds of the medical press relative to two cases of poisoning reported as occurring in young infants who had used white vulcanized rubber nipples. The poisoning was said to be due to the sulphide of carbon used in vulcanizing the rubber.

GLEANINGS FROM EXCHANGES.

CHLORAL AS AN ANTIDOTE.—Prof. Husemann, of Göttingen, has been engaged in a long series of observations on the antagonistic and antidotal actions of drugs, and some of his investigations which relate especially to chloral are described in a recent number of the *Archiv für Exper. Pathologie*. Of these the following is a summary. Chloral hydrate is known to act as an antidote to strychnine, lessening the spasm, and even preventing death. It has a similar action in the case of the mixture of strychnine bases sold under the name of brucin, and also against the opium alkaloid thebaia, which simultaneously tetanizes and lessens sensibility. The spasms produced by chloride of ammonium diminish under the employment of non-fatal doses of chloral hydrate, and can indeed be completely stopped. Nevertheless death occurs, probably from the paralyzing effect of both substances on the respiratory centre. The antidotal effect of chloral on the action of the poisons which cause convulsions by their action on the brain is not the same for all these substances. The quantity of the poison which can be counteracted by the antidote appears to be considerably greater in the case of picROTOXIN than in the case of CODEIA. Of the latter, indeed, the fatal dose, and even a quantity half as much greater, can be rendered harmless, but twice the fatal dose cannot be counteracted, and is still fatal. Calabar is counteracted by chloral hydrate in about the same degree as codeia. The symptoms produced in rabbits by poisoning with baryta are not materially altered by the action of chloral, which does not appear to prolong life. So also with carbolic acid: the spasms produced by it are not arrested by chloral, and the minimum dose fatal to rabbits still produces death. The combination of a fatal dose of carbolic acid with a non-fatal dose of chloral hydrate causes in rabbits a remarkable fall of temperature, which is not produced by the action of these alone. As a rule, when chloral antagonizes the action of these cerebral poisons, the respiration sinks in frequency much more than in the case of the analogous action of chloral on the tetanizing poison. The depression of temperature caused by the chloral is almost independent of any peripheral loss of heat. The elevation of temperature due to division of the spinal cord is hindered by chloral hydrate. The depressing action of thebaia and codeia on the cerebrum, which is distinctly perceptible in many animals in addition to their action in causing spasm, is the chief effect recognizable in man. On the one hand, thebaia has a distinct action in lessening pain; and on the other, in human poisonings with this opium alkaloid, chloral hydrate is of little use, and in the case of poisoning by codeia, on account of the col-

lapse which is produced, it is positively injurious.—*Lancet*, vol. i., 1879, p. 382.

CONINE AND ITS SALTS.—The *Annuaire de Thérapeutique* for 1879, edited by M. Bouchardat, gives an abstract of an inaugural thesis by M. Tiryakian, on conine and its salts, which possesses considerable interest. The experiments were performed in the laboratory of M. Vulpian, and the conclusions arrived at were as follows. Conine or conicine is a very unstable substance. As commonly sold it is very impure, and gives very variable results; when pure it has a powerful irritant and even caustic local action. Its hypodermic use should therefore be a subject of careful consideration, and should not be rashly adopted. It appears to be more active when ingested into the stomach than when injected subcutaneously. In the latter case it does not completely disappear, the channels of absorption being partially destroyed by its local action. Hence it should, as a rule, be administered by the stomach. It acts as a poison, both on man and on animals; but the organism speedily tolerates it, and owing to this toleration it is necessary constantly to augment the dose. There is no danger, under these circumstances, of a cumulative action being exerted, since conine is rapidly eliminated from the system. Conine is neither a muscular nor a cardiac poison; it acts essentially on the cerebro-spinal centres. The substance which acts on the peripheral extremities of the motor nerves is not conine; it is a kind of empyreumatic essential oil, which M. Mourrut has extracted from conine supplied from Germany, and which probably exists in all commercial specimens of the drug. The chlorhydrate and bromhydrate of conine are stable salts; they induce symptoms which are identical with those of conine itself, but are more energetic. The fatal effects of a poisonous dose of these substances seem to be due to asphyxia. Physiological antagonism between conine and strychnia is possible, but has not yet been demonstrated. The convulsions caused by strychnia can, however, be suppressed by conine. To obtain any sensible effect of the bromhydrate of conine in an adult man a dose of at least 1.5 grains is required, and the dose may be increased to three, four, or five grains, according to the effect produced or the tolerance on the part of the patient. It is rapidly eliminated by the lungs, and the doses should therefore be given in close succession. As much as fifteen grains of conine may be given in twenty-four hours, in pills or syrup. The symptoms produced are, great muscular weakness; lassitude; fatigue; heaviness of the eyelids; heaviness of the head; difficulty of walking; sleep, or often, rather, a state of torpor without sleep. The intellectual faculties are perfectly preserved. There is no aberration of the sensibility, except sometimes slight hyperæsthesia and tingling of the fingers

and toes, but it is never perverted or diminished. Vision is sometimes temporarily disturbed, objects being seen as through a fog. There is no cephalalgia or vertigo. The pupils undergo no alteration. The pulse remains unchanged. There are no disturbances of the digestive tract; neither nausea, vomiting, nor diarrhoea. Respiration, secretion, and the temperature of the body are unaltered. Infants at the breast are not affected by conine when this is administered to the mother, and they bear small doses well. The author believes that conine will be found to be of service in bronchitis or phthisical cough, and in nervous cough; in whooping-cough; in epilepsy; in neuralgic and articular pain. It is rationally indicated in cases of hyperæsthesia; in chorea, convulsion and trembling, and in tetanus.—*Lancet*, April 26, 1879.

ELASTIC PRESSURE IN THE TREATMENT OF INFLAMMATION OF THE JOINTS.—Mr. Rush-ton Parker, in reply to the arguments of Mr. Keetley in favor of hydraulic compression, says that he opposes compression from practical experience. The repeated pressure inseparable from flexion in the use of a knee-joint, the subject of hydrarthrosis, is a frequent and often the only obstacle to speedy recovery. It must be admitted that concentric compression from without increases the fluid tension within a sac containing fluid. Whether or not the absorption of that fluid be thereby promoted is another matter. Mr. Parker thinks that facts do not bear out this theory; compression is not followed by absorption of the fluid. Synovitis of the knee often gets well after the application of fomentations, iodine, etc., and even when wholly untended and unprotected from use. The question is, What is the treatment under which no case shall get worse, and for mere want of which any case may fail to get well, and the laws governing the use of treatment? Mr. Parker thinks the plan he is accustomed to follow answers this question. He fixes the joint by means of a back-splint or a number of adhesive strips; then aspirating the joint, when this seems needful, in both synovitis and bursitis. There are certain measures which Mr. Parker unhesitatingly condemns. Among these are blistering, firing, the so-called passive motion, and, equally, the too early recommendation of voluntary motion. The solid-rubber bandage he also condemns. As for the various mercurialized, iodized, or improvised applications, he considers them as "useless but harmless incantations which are not without their psychological uses as placebos."—*Lancet*, vol. i., 1879, p. 589.

A HIGHLY VASCULAR NÆVUS TREATED BY INTERSTITIAL INJECTION OF A FIFTEEN-PERCENT. SOLUTION OF CANTHARIDINE IN CHLOROFORM.—On September 21, 1878, a child was brought to the Hôpital Saint-Antoine, bearing in the inguinal region a prominent nœvus of bright-red color, the size of a large

hazel-nut, from which, from time to time, slight hemorrhages took place, which led its mother to seek a cure of the little tumor. On the 22d there was injected half a gramme of the solution, containing seven and a half milligrammes of cantharidine; at the moment the child cried, but in half an hour was quiet. Two hours after, it complained of smarting and pain in the tumor; three hours after, a congestive zone around the nœvus; twelve hours after, a vesicle; and in twenty-four hours, an eschar, which enlarged the following days; fourth day, eschar very distinct, and several small vesicles in the healthy skin around the nœvus. About the twelfth day eschar completely formed, and on the twentieth commencement of line of separation on a level with healthy skin; for the eschar was not exactly limited to the tumor. One month after, eschar on the point of falling, and in two months there remained a slight wound, with tendency to heal; two and a half months after, the cicatrization was complete, with tendency to diminish. Finally, three months after, there remained but a superficial scar, without any appearance of the vascular tumor.—From the French.—*Chicago Medical Journal and Examiner*, May, 1879.

SPONTANEOUS FRACTURE OF FEMUR AT THE SEAT OF A SYPHILITIC NODE.—The following cases occurred in Mr. Hutchinson's wards, in the London Hospital. A girl of 17, the subject of inherited syphilis, and suffering from an enlargement of the femur, while standing before a shop-window one day, suddenly felt her right leg give way under her, and she was unable to stand. On being taken to the hospital, she was found to have an oblique fracture of the right femur, about the middle third. The second case was that of a lad apparently about 12 or 13 years of age, who showed an ovoid, ill-defined swelling apparently of the bone itself, situated about the middle of the thigh. No history of struma, phthisis, cancer, or syphilis in the family. The growth had been increasing since it was first noticed, twelve months previously. There was lancinating pain, worse at night, along the course of the external cutaneous nerve. Believing that this might be a syphilitic node like the former case, and that there was danger of fracture, Mr. Hutchinson ordered iodide of potassium and directed that the boy should be kept quiet.—*Medical Times and Gazette*, vol. i., 1879, p. 348.

CASE-TAKING BY NOTATION.—Dr. Henry Veale describes a method of taking notes by the use of certain abbreviations and signs for the various parts of the body, organs, conditions, etc., which should be of value to hospital registrars and others obliged to note large numbers of cases with all practicable fulness. The method requires some little study to master, but must repay the student in the long run. It may be found in the *British Medical Journal* for March 15.

MISCELLANY.

THE SANITARY CONDITION OF MALTA.—Mr. Plimpsoll, the well-known English philanthropist, has been investigating the sanitary condition of Valetta, where, it appears, the poor population live chiefly in cellars. He says of these cellars or pits,—

"They have no fireplace, and therefore no chimneys, and serve singly for a whole family,—man, wife, and children. They have no windows, and some have no other aperture of any kind than the door; and when you have reached the bottom of the well you find the floor, the solid rock, wet with urine and foul with the ordure of the children. So little air reaches the bottom that the floor of the yard or well never dries, and so little light that when you are asked to enter and stand in the doorway it is dark as pitch, and you have to light a wax match to avoid falling down the two or three steps within the doorway. . . . The excrement in many of them is put into a box over the sewer, about twenty inches square and high. It goes right down into the untrapped sewer, and there accumulates in the dry season, unmixed with ashes or dry dust of any kind."

In one of these filthy dens, under a handsome house in the Strada Maza Muscetto, the writer found, in an area of sixteen hundred and ninety-two feet, three stories or tiers of six cellars in each, and in the lowest of all above thirty people were living, thirty-nine feet below the level of the street. The yard was only eleven feet wide, and the walls to the sky-line were ninety feet all round.

With such sanitary arrangements, it does not surprise us to learn that the death-rate in 1874 was 49.24 per 1000 of population.

LEAD-POISONING FROM BEER.—A bartender, engaged in a large hotel, being the first down-stairs in the morning, was accustomed to draw and drink beer from an engine which had not been turned off or exhausted at the cellar the previous night. After he had pursued this practice for a week, he experienced a sweetish astringent taste, and suffered from uneasiness of the bowels. These symptoms increased, and when, at the end of three weeks, he sought advice of Dr. Hewett, who reports the case, he had colic, a well-marked lead-line about the gums, and symptoms of paralysis of the left arm. An analysis of the contents of one of the pipes showed lead present to the extent of 0.26 gr. per gallon.—*British Medical Journal*, April 12, 1879.

REMARKABLE GROWTH OF HAIR.—At one of his lectures delivered at the College of Physicians a year or two ago, Mr. Erasmus Wilson, of London, showed the photograph of a lady of 28, five feet five inches in height, whose hair when standing up enveloped her like a beautiful golden veil, trailing many inches on the ground. The longest hairs upon this lady's head measured six feet three

inches and a half in length. Thirty inches is the full average length in women, a yard being considered a fine and unusual growth. This, therefore, is a very extraordinary length of hair,—the longest, we believe, on record.

PRECAUTIONS AGAINST THE PLAGUE IN LIVERPOOL.—A Swedish steamer laden with rags from Libau, having arrived in the Tyne docks, has been placed in quarantine. So vigilant were the authorities that a man who had gone on board in the ordinary course of business was detained, and not allowed to return on shore until he had been "fumigated."

THE PARIS FACULTY OF MEDICINE.—M. Brouardel has been chosen to the chair of Legal Medicine, succeeding the late Ambroise Tardieu. M. Laboulbène follows Prof. Parrot in the chair of the History of Medicine, the latter taking that of Diseases of Children.

THE death of Dr. Charles Murchison is announced. He had been suffering for some time with cardiac disease, but his death was quite sudden, occurring in the interval between seeing two patients in his office. Dr. Murchison is chiefly known in this country by his classical work "On Fever."

"TO SUPPLY A WANT LONG FELT."—The number of journals relating to the medical sciences published at Paris amounts to eighty!—*Lyon Méd.*

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM MAY 18 TO MAY 31, 1879.

SURGEONS C. T. ALEXANDER AND D. L. HUNTINGTON and **ASSISTANT-SURGEON H. LIPPINCOTT** appointed a Board to assemble, June 2 proximo, at Military Academy, West Point, N.Y., for examination of physical qualifications of members of graduating class and of candidates for admission to Military Academy. S. O. 122, A. G. O., May 23, 1879.

STORROW, S. A., MAJOR AND SURGEON.—Relieved from duty at Fort Laramie, and assigned to duty as Post-Surgeon at Fort D. A. Russell, W. T., relieving Major J. R. Gibson, Surgeon. S. O. 45, Department of the Platte, May 26, 1879.

O'REILLY, R. M., CAPTAIN AND ASSISTANT-SURGEON, McPherson Barracks, Atlanta, Ga., granted leave of absence for one month, with permission to apply for an extension of one month. S. O. 84, Department of the South, May 28, 1879.

DE WITT, C., CAPTAIN AND ASSISTANT-SURGEON.—Relieved from duty at Fort Fred. Steele, W. T., and assigned to duty as Post-Surgeon at Fort Sidney, Neb., relieving Captain C. E. Munn, Assistant-Surgeon. S. O. 45, c. 2, Department of the Platte.

SHANNON, W. C., FIRST-LIEUTENANT AND ASSISTANT-SURGEON, Fort Clark, Texas, granted leave of absence for one month, with permission to leave the Department, to take effect when relieved from duty with Tenth Infantry, now en route to Department of the East. S. O. 101, Department of Texas, May 14, 1879.

LA GARDE, L. A., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Having reported in person at these Headquarters pursuant to orders from Headquarters of the Army, assigned to duty at Cantonment on North Fork of Canadian River, Indian Territory. S. O. 101, Department of the Missouri, May 23, 1879.

KINSMAN, J. H., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence from March 21, 1879, to September 21, 1879. His resignation accepted by the President, to take effect September 21, 1879. S. O. 117, A. G. O., May 17, 1879.